See website http://churchofphysics.org for Physics Paper that these emails are about

Emails from Nobel Prize winner Gerard 't Hooft show blatant continued evasion that should make one question whether the confidence in Special Relativity arises from scientific methodology or from evasion of theoretical and experimental science (also includes correspondence with his two Relativity-Defending Internet Partners)

Evasion of experimental and theoretical problems with Special Relativity is not scientific behavior and the cause of this departure from science is because Special Relativity has become a religion.

Many physicists would express pain and disappointment at Special Relativity being called a religion; however, I do not make this claim frivolously. I have come to understand this after 10 years of struggle, and in this spirit are my below email exchanges and notes. I have exhausted all avenues in these years, a recent one being Committee on Publication Ethics (COPE) to whom I wrote in Dec 2014: "We have here a case of science being run by blind faith in the accepted theory, with journals having the job of blocking challenges to this worshipped theory. Something needs to be about this."

Nobel Prize winner Gerard 't Hooft is, in my opinion, a devout worshipper of Special Relativity and below are his repeated evasions; those who are not blind relativity-worshippers should be able to see that evasions is all they are.

The below Nov 2015 email exchange was not the first time Gerard 't Hooft has evasively dismissed by paper. Excerpt from his previous evasion is below; see full details of this evasion here.

Excerpt from Nov 2014 report written by 't Hooft as Referee and Editor, Foundations of Physics:

"The author of this manuscript fails to make clear how his/her work relates to current discussions in the foundations of physics. Regrettably, this fact places the current submission outside the scope of Foundations of Physics. This is displayed by a lack of references to recent literature."

To which I responded:

"Professor 't Hooft - The most recent reference mentioned in my submitted paper was the 2010 Quasars paper, where quasars are not showing Time Dilation. There should have been vigorous discussion of this experimental failure of Special Relativity in physics journals. But since today's editors and authors are relativity-worshippers there is no such discussion."

Gerard 't Hooft below was replying to this email which was sent in Nov 2015 to those teaching Special Relativity and to others. It was copied to Nobel Prize winners Steven Weinberg, Gerard 't Hooft and Frank Wilczek.

From: "Hooft, G. 't (Gerard)"
To: Ashish Sirohi
Date: Wednesday, November 25, 2015
Subject: Re: Two Mistakes in your Lectures on Special Relativity

At the risk of running into eternal arguments, which is the usual thing that happens when discussing with confused outsiders, let me explain to you what you did wrong:

If you read the text books carefully, they also explain that if you perform two Lorentz transformations in

succession, you should again get a Lorentz transformation. The complete invariance group contains not only Lorentz transformations in the z -direction, but also in the x- and the y-direction, and in addition the rotations. You have to check them all.

Your "modified" Lorentz transformation contains an extra factor Sqrt(1-v^2/c^2). Now if I carry out two transformations, one with velocity v and one with velocity -v in the z direction, you get that factor squared. That's a scale transformation.

Now the velocity of light is invariant under scale transformations, but the laws of physics are not: atoms have a definite size, clocks go with fixed speeds, and so on.

So you have to ask for a transformation rule that will always go to itself when you apply two transformations in succession.

Your transformation fails this test.

Nothing in special relativity has to be rewritten.

Actually the biggest mistake you made is to think that physicists would not have noticed such a flaw. If you knew a bit more mathematics you would have understood that physicists don't make the kind of mistakes you accuse them of.

Most of my colleagues refuse to even talk with people who think like you do.

Hope that helps.

G. 't Hooft

From: Ashish Sirohi
To: "Hooft, G. 't (Gerard)"
Date: Wednesday, November 26, 2015
Subject: Re: Two Mistakes in your Lectures on Special Relativity

You say: Your "modified" Lorentz transformation contains an extra factor Sqrt(1-v^2/c^2).

My equations are in Section 1,2,4 of the paper which I attach again. Those equations do NOT have any Sqrt(1-v^2/c^2) factor at all. (You are taking equations from Section 6, which section was only for comparison with the foundations of the Lorentz transformations.)

You say: Actually the biggest mistake you made is to think that physicists would not have noticed such a flaw. If you knew a bit more mathematics you would have understood that physicists don't make the kind of mistakes you accuse them of.

You assume based on faith that a challenge must be trivial. Your above assumption that this is about factor Sqrt(1-v^2/c^2) is because you cannot face reality and are avoiding Sections 1-4 of the paper.

Max Planck gave us the truth about physicists of his time: "making them see the light" is futile. They die clinging to dogmas. But at least they understood what truth they are rejecting.

You are so religious and dogmatic in your worship of relativity that you will dismiss, without properly reading, anything that does not support your beliefs. You write to me without addressing the actual equations I gave in my paper. You will not even properly read a paper that challenges your dogma? Responsibility to at least properly read before dismissing should be a minimum requirement for someone who is also an Editor of a science journal.

Please properly read the paper and address the equations. But why should you waste your time? Your faith can never be defeated by science. You will again tell me that Section 6 are my Equations and I am being trivial.

If you choose to properly read my paper, then can you answer plainly answer this question (which Editors and Referees have refused to answer for 10 years): Does the paper give a counter-example to Einstein's derivation that Special Relativity's two postulates necessarily lead to the Lorentz transformations?

From: "Hooft, G. 't (Gerard)"
To: Ashish Sirohi
Date: Friday, November 27, 2015
Subject: Re: Two Mistakes in your Lectures on Special Relativity

Searching for statements that seem to make sense I found those only at the end of this narrative. That those are wrong was easy to see. The rest was too incoherent for me to comprehend. What you call dogma is just rigorous mathematical deduction. It is a misconception often encountered in lay people that relativity theory results from arguments of the sort one finds in popular science books. It doesn't. Relativity is a rigorous mathematical property of transformations called group theory (look up Lorentz group in google). Groups have properties that one has to respect or reject completely, this has nothing to do with religion or worship, which are notions we don not allow to enter in our way of doing science.

But I don't intend to continue this kind of discussion.

G. 't H

From: Ashish Sirohi
To: "Hooft, G. 't (Gerard)"
Date: Friday, November 27, 2015
Subject: Re: Two Mistakes in your Lectures on Special Relativity

You say: Relativity is a rigorous mathematical property of transformations called group theory.

The derivation that Special Relativity's postulates necessarily lead to the Lorentz transformations is wrong, and this is shown by the counter-example I have provided in my paper. If Special Relativity was rigorous in its derivation then I would not have been able to find a counterexample to the derivation, would I?

What about the Quasars Failure of Special Relativity?

You do not seem willing to address these scientific matters.

The only science argument you have made is about Sqrt(1-v^2/c^2) factor which point, as explained in my previous email, did not even address the specifics.

Max Planck (see previous email) was right, wasn't he?

"We don't really replace theories, we expand on them." - Gerard 't Hooft
(And in expanding on them you will ignore/evade counterexamples and experimental failures)

From: "Hooft, G. 't (Gerard)"

To: Ashish Sirohi
Sent: Friday, November 27, 2015
Subject: Re: Two Mistakes in your Lectures on Special Relativity

 The very last time:

 1. The extra requirement needed (and the good text books do make remarks about this issue) is that nature's invariance group does not include scale transformations. Your "counter example" leads to scale transformations.
2. Quasars obey general relativity, not special relativity

G. 't H

Since 't Hooft seemed hostile to continued communication I did not reply further. These are the scientific facts:

1. Scale transformation (also called a "dilation transformation") refers to a transformation leading to dilation (contraction). Since my equations do not have any dilation 't Hooft's argument does not apply (it applies for him only because even after my pointing, see my above emails to him, he will not address my specific equations).

2. Cause of Quasar Luminosity may have to do with gravitation theory (General Relativity being the accepted theory today), but correlation between quasars redshift and timescales is purely Special Relativity. 't Hooft is evading this, it seems he will not address the Special Relativity quasar anomaly.

As for 't Hooft's point on groups and symmetry, what are physicists going to do with groups derived from the Lorentz transformations if these transformations are not correct in the physical world? Symmetries and groups can be rebuilt based on what is true in the physical world. Devastating as it may be, physicists will have to stop building on what groups and symmetries they have come to mathematically admire, and stick to physics of the actual physical world.

Gerard 't Hooft runs webpages, http://www.staff.science.uu.nl/~hooft101 and http://www.staff.science.uu.nl/~hooft101/theoristbad.html where he endorses and links to two other professors, Warren Siegel and John Baez, who, like him, dismiss *all* who challenge Special or General Relativity as being crackpots or quacks. Warren Siegel of replied to the same mail 't Hooft replied to. The other, John Baez, did not accept my special invite to reply.

From: Warren Siegel
To: Ashish Sirohi
Date: Wednesday, November 25
Subject: Re: Two Mistakes in your Lectures on Special Relativity

Maybe you have used too weak a definition of special relativity.

One that is sufficient for most purposes is that the only observer-independent quantity relating 2 spacetime events in terms of position & time, due to Minkowski, is

$c^2(t-t')^2 - (x-x')^2 - (y-y')^2 - (z-z')^2$

Lorentz transformations leave this quantity invariant, but are a less useful way to state this result.

I see nothing in your theory that requires something as difficult & inaccurate to observe as quasars to test it.

In fact, the theory of quasars requires understanding of astrophysics & cosmology, theories that are much less well verified than special relativity, so those theories would be modified well before special relativity.

You might as well say that because your car broke down a year before you expected it to that Newton's laws are invalid.

Special relativity has been proven in the extreme situations of particle accelerators, where massive particles travel @ close to the speed of light, & behave similarly to light under even those conditions.

Special relativity has been verified to 12 decimal places by measurement of the anomalous magnetic moment.

This is the most accurate verified prediction in all of science.

It requires Lorentz invariance for both light & massive particles.

In that light, it's hard to see how teaching Lorentz transformations could be "unethical".

If you want to throw out Lorentz invariance, you must replace it with something that still agrees to 12 decimal places.

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There were several other emails exchanged with Professor Siegel between November 25 and December 2, 2015. I give excerpts below. You can read full-text [here](#).

From Ashish Sirohi to Warren Siegel (Excerpts)

You say: In that light, it's hard to see how teaching Lorentz transformations could be "unethical".

I never said the above. I said:
However, the Derivation of the Lorentz Transformations that you teach to students is based on unstated and incorrect assumptions. Given that attached counter-example to the derivation exists it would be unethical for you to continue to teach an incorrect derivation.

--

You have to address my paper and tell me what is wrong with it. You (and Minskowski) are looking for transformations between coordinates.

 --

In general Einstein, Lorentz, Poincare, Minkowski, all start with this wrong conclusion: since speed=distance/time the only way speed of light would remain same when measured by different moving observers is if there existed formulas (coordinate transformations) by which distance and time measurements changed between the reference frames of these observers.

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In fact starting with velocity is the deliberate approach of my paper. Why this approach? Because the second postulate is about the speed of light and my paper explains why light is seen at same speed by all observers (without deriving this from distance and time formulas).

From Warren Siegel to Ashish Sirohi (Excerpts)

Special relativity is not about just velocity. Velocity is derived from coordinates. Velocity is the time derivative of spatial position, so you can't even discuss velocity without first discussing space and time position.

--

Velocity is DEFINED in terms of space & time.
Do you know what a definition is?

--

Minkowski starts with the Minkowski metric.
All of special relativity follows from there.

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Those 2 postulates are insufficient to define special relativity as it is understood today.

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Comments on above email exchange with Professor Siegel

Professor Siegel gives me his dogma that because Einstein (and Minkowski) did not approach the matter directly with velocity, it is not acceptable for me to start with velocity. He says velocity is defined in terms of distance and time, and pretends that by stating this he is making some logical argument against my approach. Pretending is enough to defend Special Relativity, as is evasion, because relativity-worshippers can say they explained it but crackpots did not understand. Relativity-worshippers have set up a system whereby they are able evade specifics of scientific challenges and lump all of them as crackpot challenges.

Professor Siegel starts by listing experiments. Since my equations are consistent with the postulates of Special Relativity as well as its momentum-energy equations, all experimental tests of these also confirm my equations. They differ on length contraction (never experimentally tested) and in approach to time dilation (though my equations also have different observers measuring different times). Professor Siegel does not seem to realize that Quasars cannot just be made consistent with Special Relativity by adjusting something (see my 't Hooft note above). In fact, it is for this reason that Quasars Failure of Special Relativity's Time Dilation is not addressed in popular books and articles written by sophisticated relativity-worshippers . For the same reason, their beloved publications such as Nature and Science, which are always competing to religiously further experimentally confirm special and general relativity, have never acknowledged this experimental shortcoming of Special Relativity. If Special Relativity was science and not religion then acknowledging and addressing its experimental failure would be of key importance.

Siegel suggests that Minkowski somehow had the mathematics correct, even if Einstein didn't have a valid

derivation; in my opinion Siegel is grasping for straws. But let Siegel at least first clearly accept (and put on his 't Hoof t–recommended website) that my counterexample shows that Einstein was wrong in thinking that he had a derivation of the Lorentz Transformations.

John Baez – the greatest and most prolific crackpot

John Baez was among the group I sent my above Nov 2015 email to, and I sent him below extra invite twice, requesting any comments.

Dear Professor Baez,

I have known you over the years, starting from the Usenet physics groups and have admired your expertise and energy in addressing claims that Special Relativity is wrong; most of these were were that the second postulate is not correct (and I have always agreed with you regarding that claim being total nuisance).

Would you be kind enough to use your sagacity to address this paper? Again, the postulates of Special Relativity are, of course, correct and the paper does not doubt this.

And I promise this one won't be as easy for you to debunk, so may be worth a look. You will find me highly receptive to your valid arguments. It will also help in my not continuing to waste other physicists' time.

If you are convinced that Special Relativity is right and you can defend it you should rise to have a rebuttal to this. (If your faith in Special Relativity results from avoiding scientific facts, as some have claimed, then ignore this too).

Your time and help would be much appreciated.

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John Baez did not accept my invite. As above email says, the expertise and energy he has shown in addressing various misconceptions about Special Relativity are admirable. However, I have known his blogs/postings and websites and I give below my opinion of these.

John Baez is a relativity-worshipping crackpot professor who has been misleading students and fellow scientists regarding the experimental status of Special Relativity. Professional crackpots like him, who work with the endorsement and support of physics authorities, have been a large cause of the misinformation among scientists regarding the experimental and theoretical status of Special Relativity and General Relativity. The deceit (or incompetence) at http://math.ucr.edu/home/baez/physics/Relativity/SR/experiments.html (gleefully endorsed and hosted by Baez, and written by his fellow crackpots, Tom Roberts and Siegmar Schleif) has personally misled me. This list also has compilation of lists by other experts (books and articles chosen by these relativity-worshippers) that have all avoided mentioning quasars failure; list does select two quasars observations that they find useful. This list stopped being updated after 2007, but Quasar violations of Special Relativity go back to 2001, http://iopscience.iop.org/article/10.1086/320683/fulltext/. In internet forums and pre-internet Usenet Baez has often used this deceitful/incompetent list to advance his relativity-worshiping cause and to dismiss all who challenge Special Relativity as being crackpots. The moral is: Never expect a relativity-worshipping crackpot professor like Baez to properly do a scientist's job by at least having facts correct regarding experimental status.

Amateurs reading popular books, watching a science program/recording, browsing science on the net etc. can have ideas and dreams of grandeur for their idea; many physicists lump all of them together under the term "crackpots". But they are relatively okay because they do not have to adhere to professional standards and responsibility. However, there perhaps can be no greater crackpot than a professor who provides and uses a

compilation that, as a result of blind faith and/or incompetence, spreads misinformation on experimental status throughout the world. Adding this measure of deceit/professional-incomptence to allotment of [crackpot index points](#) should, I believe, give Professor John Baez the highest points, which means he may be one of the greatest crackpots ever! (Tom Roberts, Siegmar Schleif, and others should join Baez in this honor but, in their favor, they have not been touting this compilation to attack and call others crackpots). It is a sad state of affairs that so many pages about relativity (and these include published books and academic articles) give this link, http://math.ucr.edu/home/baez/physics/Relativity/SR/experiments.html, and continue to help the greatest and most prolific crackpot, John Baez, spread misinformation.